REMARKS

Claims 1-16 and 18-24 are pending in the subject application. By this Amendment, applicants have canceled claims 3-14 without prejudice or disclaimer, and have amended claims 1, 15 and 18. Applicants maintain that these amendments raise no issue of new matter. Accordingly, claims 1, 2, 15, 16 and 18-24 will be pending and under examination upon entry of this Amendment.

In view of the arguments below, applicants maintain that the Examiner's rejections have been overcome, and respectfully request that they be withdrawn.

Rejection Under 35 U.S.C. §112, Second Paragraph

The Examiner rejected claims 18-20 under 35 U.S.C. §112, second paragraph, as allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Specifically, the Examiner alleges that the phrase "linked to a regulatory element" in claim 18 is vague.

In response, but without conceding the correctness of the Examiner's rejection, applicants note that claim 18 has been amended to insert the word "operably" before "linked" so that amended claim 18 provides for the phrase "operably linked to a regulatory element."

In view of these remarks, applicants maintain that amended claim 18 satisfies the requirements of 35 U.S.C. §112, second paragraph, and request that the rejection be withdrawn.

Rejection Under 35 U.S.C. §112, First Paragraph

The Examiner rejected claims 1-16 and 18-24 under 35 U.S.C. §112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Specifically, the Examiner alleges that the genus claimed encompasses a myriad of nucleotide sequences, and that a representative number of species for this genus has not been provided in the instant disclosure.

In response to the rejection of claims 3-15, but without conceding the correctness thereof, applicants note that the cancellation of these claims renders the rejection moot.

In response to the rejection of claims 1, 2, 15, 16, and 18-24, but without conceding the correctness of the Examiner's rejection, applicants note that, as amended, independent claims 1 and 15 provide antisense oligonucleotides which specifically hybridize to nucleic acids encoding human DNA-dependent protein kinase subunits and methods for using such antisense oligonucleotides. As the Examiner concedes in the June 2, 2004 Office Action, the genus comprising antisense complementary to

the three subunits of the human serine/threonine kinase DNA-dependent protein kinase has been adequately described in the instant specification. Applicants maintain that one skilled in the art would understand the scope of the claimed genus as antisense oligonucleotides to human DNA-PK. In view of these remarks, applicants maintain that claims 1, 2, 15, 16 and 18-24 are adequately supported by the disclosure and satisfy the written description requirement of 35 U.S.C. §112, first paragraph.

Rejection Under 35 U.S.C. §112, First Paragraph

The Examiner rejected claims 1-14 under 35 U.S.C. §112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In response, but without conceding the correctness of the Examiner's rejection, applicants note that amended claim 1 provides for increasing susceptibility of a cell to DNA-damaging agents *in vitro*, thereby obviating the Examiner's rejection. Applicants further note that claims 3-14 have been canceled, thereby rendering the rejection of these claims moot.

In view of these remarks, applicants maintain that amended claim 1 and dependent claim 2 satisfy the enablement requirements of 35 U.S.C. §112, first paragraph.

Rejection under 35 U.S.C. §102(b)

The Examiner rejected claim 15 under 35 U.S.C. §102(b) as allegedly anticipated by Takiguchi et al.

In response, applicants respectfully traverse.

Under 35 U.S.C. §102(b), a person shall be entitled to a patent unless the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States. According to MPEP §2131.01, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Applicants note that Takiguchi et al. does not teach each and every element of amended claim 15. Claim 15 provides for an antisense oligonucleotide that specifically hybridizes to a nucleic acid encoding either a human DNA-PK catalytic subunit or a human Ku70 subunit. Applicants maintain that Takiguchi et al. teach an antisense molecule that hybridizes to mouse DNA-PK. Takiguchi et al. does not disclose antisense oligonucleotides hybridizing to human DNA-PK. Accordingly, applicants maintain that amended claim 15 is not anticipated by Takiguchi et al.

In view of these remarks, applicants maintain that amended claim 15 satisfies the requirements of 35 U.S.C. §102(b), and request that the rejection be withdrawn.

Rejection Under 35 U.S.C. §103(a)

The Examiner rejected claims 1, 2, 15, 16 and 18-24 under 35 U.S.C. §103(a) as allegedly unpatentable over Takiguchi et al. as applied to claim 15 in the 35 U.S.C. §102(b) rejection, in view of Au-Young et al.

In response to the Examiner's rejection, applicants respectfully traverse, and maintain that the Examiner has failed to establish a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness, the Examiner must demonstrate three criteria with respect to each claim. First, the cited references, when combined, teach or suggest every element of the claim. Second, one of ordinary skill would have been motivated to combine the teachings of the cited references at the time of the invention. And third, there would have been a reasonable expectation that the claimed invention would succeed.

In light of these requirements, applicants maintain that the cited references fail to support a *prima facie* case of obviousness for amended independent claims 1 and 15 and

dependent claims 2, 16 and 18-24.

As stated above, the claimed invention provides antisense oligonucleotides which specifically hybridize to nucleic acids encoding human DNA-dependent protein kinase subunits. As detailed above, Takiguchi et al. teach an antisense molecule that hybridizes to mouse DNA-PK, but does not disclose antisense oligonucleotides hybridizing to human DNA-PK. Applicants maintain that Au-Young et al. also fail to teach this element, and therefore, the cited references in combination fail to teach each and every element of the rejected claims.

For the reasons above, the cited references combined fail to teach the elements of the claimed antisense oligonucleotides. Absent such teaching, there could not have been a motive to combine or a reasonable expectation of success.

In view of the above remarks, applicants maintain that the Examiner has failed to set forth a *prima facie* case of obviousness, and that accordingly, claims 1, 2, 15, 16 and 18-24 satisfy the requirements of 35 U.S.C. §103(a).

Provisional Rejection Under 35 U.S.C. §101, Double Patenting

The Examiner provisionally rejected claims 1-16 and 18-24 under 35 U.S.C. §101 as claiming the same invention as that of claims 1-24 of copending U.S. Application No. 10/712,642.

Applicants understand that this provisional rejection will be held in abeyance until the claims of the subject application are deemed allowable.

Conclusion

For the reasons set forth above, applicants respectfully request that the Examiner reconsider and withdraw the rejections, and solicit allowance of pending claims 1, 2, 15, 16 and 18-24.

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorneys invite the Examiner to telephone them at the number provided below.

No fee is deemed necessary in connection with the filing of this Amendment. However, if any fee is required, authorization is given to charge the amount of such fee to Deposit Account No. 03-3125.

Respectfully submitted,

I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to:
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